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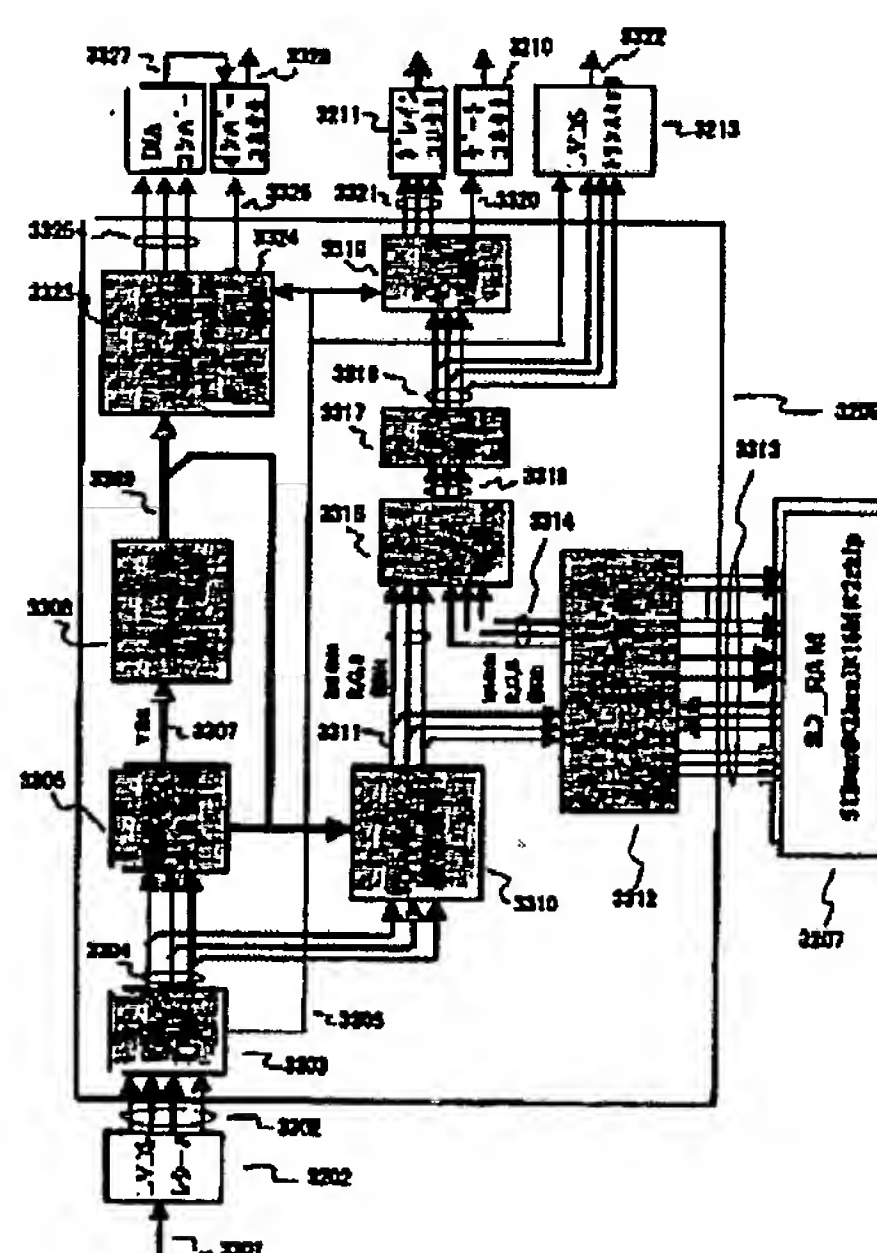
(54)【発明の名称】 液晶表示装置

(57)【要約】

【課題】本発明の課題は、表示画像の輝度を効率よく向上させると共に、光源の発熱を抑制することにある。

【解決手段】本発明は、複数の画素が配置されたパネルと、これら複数の画素に表示される画像を可視化する光源と、この光源を制御する制御回路及び、映像信号の階調特性制御回路を備え、上記光源の制御回路は第1の強度を有する電流を光源に供給する第1の期間とこの第1の強度と異なる第2の強度を有する電流を光源に供給する第2の期間とを含む周期を繰り返す機能を有し、該第1の期間と該第2の期間は表示情報に従い制御回路により制御されまた、上記階調特性制御回路は同じく表示情報に従い常に良好なコントラストを得るように制御される。

図33



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*The following is a partial English translation of exemplary portions of non-English language information that may be relevant to the issue of patentability of the claims of the present application.*

Claims:

1. A liquid crystal display comprising:

a liquid crystal panel; and

a light source illuminating the liquid crystal panel,

wherein

the light source has a cycle which is made up of a period in which the light source exhibits a first radiation luminance and a period in which the light source exhibits a second radiation luminance; and

the light source has a control circuit which changes the time ratio of the first radiation luminance and the second radiation luminance in the cycle on the basis of externally supplied display data.

2. The liquid crystal display of claim 1, wherein:

the period in which the light source exhibits the first radiation luminance is longer than the period in which the light source exhibits the second radiation luminance; and

the control circuit sets the time ratio of the first radiation luminance in the cycle to less than 50% when the display data represents a moving image and 50% or more when the display data represents a still image.

3. The liquid crystal display of claim 1, wherein the second radiation luminance is in effect 0.

4. The liquid crystal display of claim 1, wherein the control circuit includes:

a data storage storing at least a frame of display data;

a data compare section comparing associated pixels between the display data stored in the data storage and input display data; and

a pulse control section supplying a signal controlling the time ratio of the first radiation luminance in the cycle in accordance with the comparison by the data compare section.

5. The liquid crystal display of claim 4, wherein:

the data stores data for some of the pixels in the

display panel as comparison pixels; and

the data compare section compares the data for the pixels stored as the comparison pixels and pixels data of corresponding input data.

[0068] ... In addition, even if the screen has a high net luminance, sufficient luminance is secured by setting the luminance in the stop period to a certain specified luminance, instead of absolutely 0 as shown in Figure 12. It is of course desirable if the period in which the luminance in the stop period is raised is somewhat shortened.

Figure 12

- A Sync signal
- B One cycle
- C Light source luminance waveform, duty 50%, high luminance
- D Light source luminance waveform, duty 50%, medium luminance
- E Light source luminance waveform, duty 50%, low luminance
- F Luminance; dark level